RESEARCH REPORT

Mental health resources in the world: results from Project Atlas of the WHO

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An estimated 450 million people alive today suffer from mental or behavioural disorders or from psychosocial problems such as those related to alcohol and drug abuse (1). Mental disorders account for a substantial proportion of disease disability and burden, yet current resources for mental health are grossly inadequate. It is indeed a paradox that though substantial information is available on the incidence, prevalence, course, diagnosis, classification, disability and burden of mental disorders, hardly any information is available on the resources that exist to respond to this burden (2).

Over the last several decades, the interest in evaluating mental health care processes has greatly increased and there are calls for development of increased information and research on mental health services (3-9). Individual country information about mental health resources from some of the developed and rich countries is available, but very little is known from most of the developing and poor countries. The information that does exist cannot be compared across countries, because reports use varying definitions and units of measurement. This imbalance between 'disease information' and 'resources information' is a major impediment to planning mental health services. Lack of information on resources also hampers efforts made by non-governmental organizations, professional associations and consumer groups to demand improvement of mental health care services and to highlight specific needs (2). The need to improve mental health services and integrate mental health into primary care was emphasized by most of the Ministers of Health who attended the World Health Assembly, 2001 (10).

Project Atlas was launched by the World Health Organization (WHO) in 2000, with the basic aim of collecting, compiling and disseminating information related to mental health resources from the WHO Member States.

METHODS

The data were collected and assimilated in a number of steps. In the first step, consultations were held with mental health experts to identify the areas of mental health resources in which there was a definite lack of information. A rough draft of a questionnaire was prepared along with a glossary of terms that were being used in the questionnaire. The working definitions of the terms were provided in the glossary in order to maintain uniformity of data. Once the questionnaire and glossary were pilot tested, the necessary amendments were made and the final version of both were translated into some of the other official WHO languages.

In the second step, the questionnaire and glossary were distributed among the focal points for mental health in the Health Ministry of each Member State with the support of the Regional Offices. The respondents were requested to follow the glossary of terms while completing the questionnaire and provide copies of documents wherever possible. In this initial phase, information was collected primarily from the governmental sources, though most governments relied on their experts to provide the available information. Data from the questionnaires were supplemented by information gathered through a literature search.

In the third step, all information collected through the questionnaire and literature search was suitably coded and keyed into an electronic database that had been created for that specific purpose. Once the dataset had been finalized it was analysed using the program SPSS 9.0. Descriptive analyses for assessing frequency and measures of central tendency for different variables were done. Qualitative data were used to enrich the information from countries and were used for the country profiles on mental health resources.

RESULTS

One hundred eighty-five Member States from the total of 191 responded. This covered 99.3% of the world's population.

As shown in Table 1, mental health policies are present in 59.5% of the countries in the world. A mental health policy is present in only 47.8% and 48.1% of countries of the African and Western Pacific Regions, respectively. More than 30% of countries do not have a national mental health programme. The European Region has the lowest number of national mental health programmes, as many European countries have mental

Table 1 Mental health policies, programmes and legislations in countries of the WHO Regions

WHO Region	Presence of a mental health policy (%) (N=185)	Presence of national mental health programme (%) (N=185)	Presence of a law in the field of mental health (%) (N=170)	Presence of disability benefits for psychiatric patients (%) (N=179)
Africa	47.8	73.9	71.1	46.5
Americas	64.5	80.6	67.9	87.1
Eastern Mediterranean	68.2	86.4	57.1	75.0
Europe	67.3	55.1	91.7	98.0
South-East Asia	70.0	80.0	70.0	90.0
Western Pacific	48.1	59.3	76.0	61.5
World	59.5	69.7	75.3	75.4

Table 2 Budget for mental health in countries of the WHO Regions

WHO Regions	Specified budget for mental health (%) (N=175)	Less than 1% of total health budget spent for mental health (%) (N=91)
Africa	62.2	78.9
Americas	92.6	27.8
Eastern Mediterranean	80.0	40.0
Europe	72.3	4.2
South-East Asia	66.7	62.5
Western Pacific	63.0	29.4
World	72.0	36.3

health programmes/plans at the provincial level and not at the national level. About a quarter of the countries do not have a law related to the field of mental health. Though 91.7% of the countries in the European Region have a mental health legislation, the same is present in only 57.1% of the countries of the Eastern Mediterranean Region. However, the majority of policies, programmes and legislations are relatively recent, most having been developed after 1990. Disability benefits for psychiatric patients are absent in one quarter of countries of the world, with the African Region having disability benefits in only 46.5% of countries.

As shown in Table 2, worldwide only 72% of countries have a specified budget for mental health. Of those countries which reported their mental health budget, 36.3% spend less than 1% of their total health budget on mental health. Almost 80% of countries of the African Region reported that they spend less than 1% of their health budget on mental health. Though the most common source of financing mental health care around the world is tax-based, out-of-pocket payment is also used by a number of countries, especially the poorer countries.

In the world, 87% of countries, covering a population of 97%, have mental health care facilities at primary care level. However, treatment facilities for severe mental disorders are present in only 59.1% of countries, with an even lower coverage for most of the other regions, except the Americas and the European Region. Even in these Regions, treatment facilities are available in only about 65% of countries. About 20% of countries do not have three of the most common psychotropic drugs required for treating mental disorders at the primary health care level. Community care programmes for mental

Table 3 Mental health care at the primary care level and in the community in countries of the WHO Regions

WHO Region	Presence of treatment facilities for severe mental disorders in primary care (%) (N=181)	Presence of three* essential therapeutic psychotropic drugs at primary care level (%) (N=175)	Presence of mental health care in community care (%) (N=183)
Africa	56.5	71.1	54.3
Americas	66.7	90.0	71.0
Eastern Mediterranean	50.0	78.9	54.5
Europe	65.3	77.8	72.3
South-East Asia	44.4	88.9	50.0
Western Pacific	55.6	88.9	66.7
World	59.1	80.6	63.4

**phenytoin, amitriptyline and chlorpromazine*

Table 4 Psychiatric beds and mental health professionals in countries of the WHO Regions

WHO Region	Number of psychiatric beds per 10,000 population (median) (N=183)	Number of psychiatrists per 100,000 population (median) (N=182)	Number of psychiatric nurses per 100,000 population (median) (N=164)	Number of psychologists working in mental health per 100,000 population (median) (N=164)	Number of social workers working in mental health per 100,000 population (median) (N=147)
Africa	0.34	0.05	0.20	0.05	0.04
Americas	3.30	1.60	2.70	2.80	1.90
Eastern Mediterranean	0.79	0.95	0.50	0.20	0.40
Europe	8.70	9.00	27.50	3.00	2.35
South-East Asia	0.33	0.21	0.16	0.02	0.05
Western Pacific	0.98	0.28	1.10	0.03	0.13
World	1.60	1.00	2.00	0.40	0.30

health are present in 63.4% of countries worldwide. The African, Eastern Mediterranean and South-East Asia Regions have even fewer countries with such programmes (Table 3)

The median number of psychiatric beds per 10,000 population varies from 0.33 in the South-East Asia Region to 8.7 in the European Region. Most of the psychiatric beds (65.1%) in the world are in mental institutions. The European Region has the highest number (median) of psychiatrists and psychiatric nurses per 100,000 population amongst all the WHO Regions. The median number of psychologists and social workers active in the mental health sector per 100,000 population in the world is very low, 0.4 and 0.3 respectively. The Regions of Africa, South-East Asia and Western Pacific are particularly deficient in the number of mental health professionals (Table 4).

Special mental health programmes for children and elderly are present in about 60% and 48% of countries in the world, respectively, though the coverage and quality of services available vary between Regions and individual countries. Non-governmental organizations in mental health are reported to be active in 88% of the countries. Mental health monitoring systems are important tools in assessing the overall mental health situation of a country; however, mental health reporting is not done by 27% of countries and data collection or epidemiological studies are absent in 44% of countries.

DISCUSSION

The development of mental health services has generally lagged behind other health services. While some countries (mostly from the economically developed regions) have well-developed resources, the majority are poor in resources. Atlas provides a baseline measure to assess these resources and also to monitor them in future.

A mental health policy, programme or legislation are important tools for the overall development of mental health resources. They act as a broad guideline and provide direction and impetus to the development of mental health care facilities in a country. The absence of one or the other in such a large proportion of countries helps to understand the poor condition of mental health care in those countries. Though the majority of countries have a law related to mental health, this law is often not comprehensive and does not adhere to the international legislation concerning human rights. Often mental health legislative issues are simply mentioned as part of a general health law or a law related to forensic medicine. Disability benefits, though present in many countries, are neither comprehensive in nature nor easily accessible and lack standardized assessment procedures. The benefits are at times in the form of premature retirement from job with a pension or a small monetary support for a brief period of time. This is inadequate for the needs of most psychiatric patients, as disability in mental disorders is often long-lasting.

For any form of service delivery, it is essential to have adequate monetary support. However, the analyses show that the governmental budget support to mental health is often miniscule. Mental health budget should increase for most countries in order to improve the resources. The proportion of mental health budget to the total health budget should be between 5 and 15% (2). This increase is required in view of the increasing burden due to neuropsychiatric disorders, which are currently estimated to account for more than 12% of the global burden due to disease, and are projected to increase to 15% in the year 2020 (1). With more money allocated to mental health, countries would be better placed to increase their infrastructure, initiate new programmes and develop human resources. More could also be spent on training, research and monitoring the mental health of the population, which are all in need of development.

The integration of mental health into primary and community care has been recommended by WHO for a long time (11,12). With the movement of deinstitutionalization, an increasing proportion of patients are being treated in the community in most developed countries. However, this is not the same across all countries. Analyses show that, though a majority of countries have incorporated mental health care facilities in their primary care level, more than 40% do not have the actual treatment facilities for severe mental disorders and about 20% lack the availability of at least three of the commonest drugs at primary level to treat mental disorders. Even when primary care facilities are present, they are not evenly distributed within a country. Large areas often do not have them. Community care facilities, though present in a larger proportion of countries compared to primary level care, are often not comprehensive and are

available in only selected centres as pilot programmes. Two of the most populous countries of the world, China and India, are examples where primary and community care facilities for mental health are available in selected areas only. However, there are a number of other countries having the same problem. This goes to show the magnitude of the lack of services in terms of actual population coverage. The importance of development of community care facilities for deinstitutionalization to happen in the true sense has been emphasised by many (4,13-16). However, a lot remains to be done.

The number of mental health professionals is low in the majority of countries. This is more so in the economically poorer Regions of Africa, South-East Asia and Western Pacific. Even in the other Regions, the distribution is not even and often the less developed countries in the Region lack an adequate number of mental health professionals. Psychiatrists, along with psychiatric nurses, psychologists and social workers, are key professionals in the delivery of psychiatric care, be it in hospitals, community settings or primary care level. Training of professionals must be adequate and in keeping with the needs of the country.

The number of psychiatric beds in large psychiatric institutions should be reduced gradually and more facilities should be made available in general hospitals and rehabilitation centres. Unfortunately, this is not the case at present, where a large proportion of psychiatric beds are still in psychiatric institutions. Countries which are in the process of deinstitutionalization should also develop a community care system simultaneously to avoid the burden of the homeless patients.

Specific population groups have their own needs and children and elderly population form a sizeable population of every country. The psychiatric problems facing these two groups of population vary to some extent from that in the general population. Methods of treatment also differ. Thus, it is essential that special programmes for mental health be available for at least these two population groups. The results obtained through this project show that there is a huge gap in the availability of services for these special populations and much needs to be done to improve the current situation. Many countries have reported having non-governmental organizations (NGOs) working in the field of mental health. However, information on the quality of services provided by them is not available. NGOs can play a constructive role in service provision in the mental health sector in the fields of advocacy, prevention, promotion, treatment and rehabilitation. The results show that there is a large number of countries not having data collection or epidemiological studies in the field of mental health. This sort of studies not only help in assessing the current situation but can also act as monitoring systems. In order to plan and implement programmes, it is essential to have a good monitoring system that can properly assess the benefits of a programme and help in providing proper direction to it.

The data collected in the course of this project have a number of limitations. The project used working definitions. The aim was to strike a balance between the definitions that are most appropriate and those that the countries currently use. Currently the definitions for mental health resources, like policy, primary care facilities, community care facilities, health information systems, vary from country to country. As a result, countries may have had difficulty in interpreting the definitions provided in the glossary and in reporting accurate information, which might be a reason for the missing information for some variables. Some of the definitions provided in the glossary, e.g. those on availability of a mental health budget, availability of disability benefits, availability of services for special populations, definition of psychologists, psychiatric nurses and social workers, would need to be amended and expanded in the future, as it was felt that some countries had problems interpreting them. Qualitative information related to implementation of policies, programmes or legislation, type of disability benefits, distribution of resources among rural and urban settings, quality of services available at primary or community level, proportion of financing for rural or urban settings, quality of services available for special populations, quality of services provided by NGOs and quality of information gathering systems cannot be gauged from these data. The information collected on the number of psychiatric beds and professionals gives the average figure for the country but does not provide information about distribution across rural or urban settings or distribution across different regions within the country (17).

In spite of these limitations, Atlas data provide a snapshot of how well prepared the countries are to respond to the increasing burden of mental disorders. The picture that emerges is indeed alarming: most countries have a gross deficiency of resources devoted to mental health care. The resources are also unevenly distributed across and within countries. It is hoped that these data will help focus attention to the urgent need to enhance the availability of mental health resources in the world.

Project Atlas is an ongoing project. Future studies are planned to collect information that is more comprehensive and also more relevant to the needs of further policy planning for individual countries. These studies will also provide comparison across time to assess any progress made in the availability of mental health resources. Studies on access to services and barriers that prevent access are also planned.

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References

1. World Health Organization. The World Health Report 2001: Mental health: new understanding, new hope. Geneva: WHO, 2001.

2. World Health Organization. Atlas: mental health resources in the world 2001. Geneva: WHO, 2001.
3. Odejide AO, Oyewunmi LK, Ohaeri JU. Psychiatry in Africa: an overview. Am J Psychiatry 1989;146:708-16.
4. Shinfuku N. Mental health services in Asia: international perspective and challenge for the coming years. Psychiatry Clin Neurosci 1998;52:269-74.
5. Mohit A. Mental health in the Eastern Mediterranean Region of the World Health Organization with a view of the future trends. Eastern Mediterranean Health J 1999;5:231-40.
6. de Jong A. Development of the International Classification of Mental Health Care (ICMHC). Acta Psychiatr Scand 2000; 102(Suppl 405):8-13.
7. Gureje O, Alem A. Mental health policy development in Africa. WHO Bull 2000;78:475-82.
8. Cooper B. Public-health psychiatry in today's Europe: scope and limitations. Soc Psychiatry Psychiatr Epidemiol 2001; 36:169-76.
9. Larrobla C, Botega NJ. Restructuring mental health: a South American survey. Soc Psychiatry Psychiatr Epidemiol 2001; 36:256-9.
10. World Health Organization. Mental health: a call for action by world health ministers. Geneva: WHO, 2001.
11. World Health Organization. Organization of mental health services in developing countries: sixteenth report of the WHO Expert Committee on Mental Health. Geneva: WHO, 1975.
12. World Health Organization. Mental health care in developing countries: a critical appraisal of research findings. Geneva: WHO, 1984.
13. Okasha A, Karam E. Mental health services and research in the Arab world. Acta Psychiatr Scand 1998;98:406-13.
14. Petersen I. Comprehensive integrated primary mental health care for South Africa. Pipedream or possibility? Soc Sci Med 2000;51:321-34.
15. Geller JL. The last half-century of psychiatric services as reflected in Psychiatric Services. Psychiatr Serv 2000;51:41-67.
16. Lamb HR, Bachrach LL. Some perspectives on deinstitutionalization. Psychiatr Serv 2001;52:1039-45.
17. World Health Organization. Atlas: country profiles on mental health resources 2001. Geneva: WHO, 2001.